



## POWER OF ATTORNEY FROM ASSIGNEE

**Broadcom Corporation**, a corporation of California, having a principal place of business at 16215 Alton Parkway, Irvine, California 92618-3616, is assignee of the entire right, title and interest for the United States of America (as defined in 35 U.S.C. § 100), by reason of an Assignment to the Assignee executed on (1) 10/4/01, (2) 8/3/01, (3) 9/7/01, (4) 9/14/01, (5) 9/6/01, (6) 9/6/01, (7) 9/2/01, (8) 8/3/01 of an invention known as **Timing Recovery and Frequency Tracking System and Method** (Attorney Docket No. 1875.056001), which is disclosed and claimed in a patent application of the same title by the inventors **(1) Aaron W. BUCHWALD, (2) Myles WAKAYAMA, (3) Michael LE, (4) Jurgen VAN ENGELEN, (5) Xicheng JIANG, (6) Hui WANG, (7) Howard A. BAUMER and (8) Avanindra MADISSETTI** (said application filed on April 30, 2001 at the U.S. Patent and Trademark Office, having Application Number 09/844,432).

The Assignee hereby appoint the U.S. attorneys associated with **CUSTOMER NUMBER 28393** to prosecute this application and any continuation, divisional, continuation-in-part, or reissue application thereof, and to transact all business in the U.S. Patent and Trademark Office connected therewith, such attorneys currently being: Robert Greene Sterne, Esq., Reg. No. 28,912; Edward J. Kessler, Esq., Reg. No. 25,688; Jorge A. Goldstein, Esq., Reg. No. 29,021; David K.S. Cornwell, Esq., Reg. No. 31,944; Robert W. Esmond, Esq., Reg. No. 32,893; Tracy-Gene G. Durkin, Esq., Reg. No. 32,831; Michele A. Cimbala, Esq., Reg. No. 33,851; Michael B. Ray, Esq., Reg. No. 33,997; Robert E. Sokohl, Esq., Reg. No. 36,013; Eric K. Steffe, Esq., Reg. No. 36,688; Michael Q. Lee, Esq., Reg. No. 35,239; Steven R. Ludwig, Esq., Reg. No. 36,203; John M. Covert, Esq., Reg. No. 38,759; and Linda E. Alcorn, Esq., Reg. No. 39,588. The Assignee hereby grants said attorneys the power to insert on this Power of Attorney any further identification that may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

Send correspondence to:

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
1100 New York Avenue, N.W.  
Suite 600  
Washington, D.C. 20005-3934  
U.S.A.

Direct phone calls to 202-371-2600.

FOR: Broadcom Corporation  
SIGNATURE: William J. Ruehle  
BY: William J. Ruehle  
TITLE: Vice President and Chief Financial Officer  
DATE: October 12, 2001



## Certificate Under 37 C.F.R. § 3.73(b)

Applicant/Patent Owner: BUCHWALD et al.

Application No./Patent No.: 09/844,432

Filed/Issue Date: April 30, 2001

Entitled: Timing Recovery and Frequency Tracking System and Method

Broadcom Corporation, a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1.  the assignee of the entire right, title, and interest, or
2.  an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

A.  An Assignment from the inventors of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

B.  A chain of title from the inventor(s) of the patent application/patent identified above to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
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Additional documents in the chain of title are listed on a supplemental sheet.

Copies of assignments or other documents in the chain of title are attached.

**[NOTE:** A separate copy (*i.e.*, the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]

The undersigned (whose title is supplied below) is empowered to act on behalf of the assignee.

Date: October 12, 2001

Name: William J. Ruehle  
Vice President and Chief Financial Officer

Title: \_\_\_\_\_

Signature: W.J. Ruehle

DO NOT FORWARD  
TO ASSIGNMENT BRANCH  
NOT FOR RECORDATION

## ASSIGNMENT

Docket Number: 1875.0560001

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: (1) Aaron W. BUCHWALD, (2) Myles WAKAYAMA, (3) Michael LE, (4) Jurgen VAN ENGELEN, (5) Xicheng JIANG, (6) Hui WANG, (7) Howard A. BAUMER and (8) Avanindra MADISSETTI, the undersigned inventors hereby sells and assigns to Broadcom Corporation (the Assignee) his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages:

check applicable box(es)  for the United States of America (as defined in 35 U.S.C. § 100),  
 and throughout the world,

(a) in the invention known as Timing Recovery and Frequency Tracking System and Method for which application(s) for patent in the United States of America has (have) been executed by the undersigned on (1) 04 OCT 01, (2) 8/8/01, (3) 8/7/01, (4) 8/14/01, (5) 8/6/01, (6) 8/6/01, (7) 8/8/2001, (8) 8/8/2001 (also known as United States Application No. 09/844,432, filed April 30, 2001), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with the application(s) and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventor(s) hereby represent(s) that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

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Appl. No. 09/844,432  
Docket Number: 1875.0560001

The undersigned inventor(s) hereby grant(s) Robert Greene Sterne, Esquire, Registration No. 28,912; Edward J. Kessler, Esquire, Registration No. 25,688; Jorge A. Goldstein, Esquire, Registration No. 29,021; David K.S. Cornwell, Esquire, Registration No. 31,944; Robert W. Esmond, Esquire, Registration No. 32,893; Tracy-Gene G. Durkin, Esquire, Registration No. 32,831; Michele A. Cimbala, Esquire, Registration No. 33,851; Michael B. Ray, Esquire, Registration No. 33,997; Robert E. Sokohl, Esquire, Registration No. 36,013; Eric K. Steffe, Esquire, Registration No. 36,688; Michael Q. Lee, Esquire, Registration No. 35,239; Steven R. Ludwig, Esquire, Registration No. 36,203; John M. Covert, Esquire, Registration No. 38,759; and Linda E. Alcorn, Esquire, Registration No. 39,588; all of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Suite 600, Washington, D.C. 20005-3934, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, executed by the undersigned inventors on the date opposite his/her name.

Date: 07 OCT 2001 Signature of Inventor: Aaron BUCHWALD  
(1) Aaron W. BUCHWALD

Date: 8 AUG 2001 Signature of Inventor: Myles WAKAYAMA  
(2) Myles WAKAYAMA

Date: 8/7/01 Signature of Inventor: Michael LE  
(3) Michael LE

Date: 8/14/01 Signature of Inventor: JOSEPHUS  
(4) Jurgen VAN ENGELEN

Date: 8/6/01 Signature of Inventor: Xicheng JIANG  
(5) Xicheng JIANG

Date: 8/6/01 Signature of Inventor: Hui WANG  
(6) Hui WANG

Date: 8/18/2001 Signature of Inventor: Howard A. BAUMER  
(7) Howard A. BAUMER

Date: 8/8/2001 Signature of Inventor: Ananindra MADISSETTI  
(8) Ananindra MADISSETTI

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